Serial No.: To Be Assigned
Group Art Unit No.: Unknown

binding of AroA and phospho(enol)pyruvate,

binding of AroA to phospho(enol)pyruvate-pyruvate kinase complex,

binding of AroA and phospho(enol)pyruvate-lactacte dehydrogenase complex,

binding of AroA and shikimate 3-phosphate,

competitive inhibition of the forward reaction of AroA by glyphosate versus phospho(enol)pyruvate,

uncompetitive inhibition of the forward reaction of AroA by glyphosate versus shikimate 3-phosphate,

competitive inhibition of the forward reaction of AroA by EPSP versus phospho(enol)pyruvate,

competitive inhibition of the forward reaction of AroA by EPSP versus shikimate 3-phosphate,

uncompetitive inhibition of the reverse reaction of AroA by glyphosate versus EPSP,

noncompetitive inhibition of the reverse reaction of AroA by glyphosate versus Pi,

competitive inhibition of the reverse reaction of AroA by shikimate 3-phosphate versus EPSP, and

uncompetitive inhibition of the reverse reaction of AroA by shikimate 3-phosphate versus Pi. a conversion of acetyl-CoA to product or a conversion of malonyl-ACP to product.

35. (Amended) A method for inhibiting an activity of AroA, wherein said activity is selected from the group consisting of:

synthesis of p-aminobenzoate,

synthesis of ubiquinone,

transformation of phospho(enol)pyruvate (PEP) and shikimate 3-phosphate (S3P) to EPSP and inorganic phosphate (Pi),

transformation of EPSP and inorganic phosphate (Pi) to phospho(enol)pyruvate (PEP) and shikimate 3-phosphate (S3P),

binding of AroA and phospho(enol)pyruvate,

binding of AroA to phospho(enol)pyruvate-pyruvate kinase complex,

binding of AroA and phospho(enol)pyruvate-lactacte dehydrogenase complex,

binding of AroA and shikimate 3-phosphate,

competitive inhibition of the forward reaction of AroA by glyphosate versus phospho(enol)pyruvate,

uncompetitive inhibition of the forward reaction of AroA by glyphosate versus shikimate 3-phosphate,

competitive inhibition of the forward reaction of AroA by EPSP versus phospho(enol)pyruvate,

competitive inhibition of the forward reaction of AroA by EPSP versus shikimate 3-phosphate,

uncompetitive inhibition of the reverse reaction of AroA by glyphosate versus EPSP,

noncompetitive inhibition of the reverse reaction of AroA by glyphosate versus Pi,

competitive inhibition of the reverse reaction of AroA by shikimate 3-phosphate versus EPSP, and

uncompetitive inhibition of the reverse reaction of AroA by shikimate 3-phosphate versus Pi. a conversion of acetyl-CoA to product or a conversion of malonyl-ACP to product,

comprising the steps of contacting a composition comprising bacteria with a compound that inhibits said activity for an effective time to cause killing or slowing or growth of said bacteria.

36. The method of claim 35 wherein said bacteria is selected from the group consisting of: a member of the genus *Staphylococcus, Staphylococcus aureus,* a member of the genus *Streptococcus,* and *Streptococcus pneumoniae.*

37. (Amended) A method for inhibiting a growth of bacteria comprising the steps of contacting a composition comprising bacteria with an antibacterially effective amount of an antagonist that inhibits an activity of AroA, wherein said activity is selected from the group consisting of:

synthesis of p-aminobenzoate,

synthesis of ubiquinone,

transformation of phospho(enol)pyruvate (PEP) and shikimate 3-phosphate (S3P) to EPSP and inorganic phosphate (P_i),

transformation of EPSP and inorganic phosphate (Pi) to phospho(enol)pyruvate (PEP) and shikimate 3-phosphate (S3P),

binding of AroA and phospho(enol)pyruvate,

binding of AroA to phospho(enol)pyruvate-pyruvate kinase complex,

binding of AroA and phospho(enol)pyruvate-lactacte dehydrogenase complex,

binding of AroA and shikimate 3-phosphate,

competitive inhibition of the forward reaction of AroA by glyphosate versus phospho(enol)pyruvate,

uncompetitive inhibition of the forward reaction of AroA by glyphosate versus shikimate 3-phosphate,

competitive inhibition of the forward reaction of AroA by EPSP versus phospho(enol)pyruvate,

competitive inhibition of the forward reaction of AroA by EPSP versus shikimate 3-phosphate,

uncompetitive inhibition of the reverse reaction of AroA by glyphosate versus EPSP,

noncompetitive inhibition of the reverse reaction of AroA by glyphosate versus Pi,

competitive inhibition of the reverse reaction of AroA by shikimate 3-phosphate versus EPSP, and

uncompetitive inhibition of the reverse reaction of AroA by shikimate 3-phosphate versus Pi. a conversion of acetyl-CoA to product or a conversion of malonyl-ACP to product.

38. (Amended) The method of claim 37 wherein said bacteria is selected from the group consisting of:

a member of the genus *Staphylococcus*, *Staphylococcus aureus*, a member of the genus *Streptococcus*, and *Streptococcus pneumoniae*.

39. (Amended) A method for inhibiting a AroA polypeptide comprising the steps of contacting a composition comprising bacteria with an antibacterially effective amount of an antagonist that inhibits an activity of AroA, wherein said activity is selected from the group consisting of:

synthesis of p-aminobenzoate,

synthesis of ubiquinone,

transformation of phospho(enol)pyruvate (PEP) and shikimate 3-phosphate (S3P) to EPSP and inorganic phosphate (Pi),

transformation of EPSP and inorganic phosphate (Pi) to phospho(enol)pyruvate (PEP) and shikimate 3-phosphate (S3P),

binding of AroA and phospho(enol)pyruvate,

binding of AroA to phospho(enol)pyruvate-pyruvate kinase complex,

binding of AroA and phospho(enol)pyruvate-lactacte dehydrogenase complex,

binding of AroA and shikimate 3-phosphate,

competitive inhibition of the forward reaction of AroA by glyphosate versus phospho(enol)pyruvate,

uncompetitive inhibition of the forward reaction of AroA by glyphosate versus shikimate 3-phosphate,

competitive inhibition of the forward reaction of AroA by EPSP versus phospho(enol)pyruvate,

competitive inhibition of the forward reaction of AroA by EPSP versus shikimate 3-phosphate,

uncompetitive inhibition of the reverse reaction of AroA by glyphosate versus EPSP,

noncompetitive inhibition of the reverse reaction of AroA by glyphosate versus Pi,

competitive inhibition of the reverse reaction of AroA by shikimate 3-phosphate versus EPSP, and

uncompetitive inhibition of the reverse reaction of AroA by shikimate 3-phosphate versus Pi. a conversion of acetyl-CoA to product or a conversion of malonyl-ACP to product.

40 (Amended) The method of claim 39[41] wherein said bacteria is selected from the group consisting of:

a member of the genus *Staphylococcus*, *Staphylococcus aureus*, a member of the genus *Streptococcus*, and *Streptococcus pneumoniae*.